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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,751	11/17/2003	Brig Barnum Elliott	BBNT-P01-090	5527
28120	7590	10/03/2006	EXAMINER	
FISH & NEAVE IP GROUP ROPES & GRAY LLP ONE INTERNATIONAL PLACE BOSTON, MA 02110-2624			PAYNE, DAVID C	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

A

Office Action Summary	Application No.	Applicant(s)	
	10/715,751	ELLIOTT, BRIG BARNUM	
	Examiner	Art Unit	
	David C. Payne	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim(s) 1-4, 6, 7, 8, 10, 15, 16, 20-34 is/are rejected under 35 U.S.C. 102(b) as being anticipated by Tasman et al. US 20050050221 A1 (Tasman).

Re claim 1, Tasman disclosed

A method of forwarding data units across an optical ad-hoc network comprising a plurality of ad-hoc optical nodes, the method comprising: employing data forwarding engines at each of the plurality of ad-hoc optical nodes; and forwarding data units across one or more optical nodes; of the plurality of ad-hoc optical nodes, via one or more optical links, using the data forwarding engines, (see e.g., Figure 1, paragraphs [0025], [0039], [0072], [0074], [0076], [0077]). It is inherent that a single network can be distinguished as multiple networks.

Re claim(s) 2-4, 16, 26-28

Tasman disclosed a variety of interfaces in the network including optical, RF, wireless etc., (see e.g., paragraphs [0025])

Re claim(s) 6, 10, 23, 24, 30

Tasman disclosed a prioritizing the forwarding of the data units in accordance with a quality of service associated with each of the data units (see e.g., paragraph(s) [0055], [0096], [0099], [0124])

Re claim 7, 31-33 Tasman disclosed

A first optical node, comprising: a network control computer configured to determine topology information regarding an optical ad-hoc network, wherein the optical ad-hoc network comprises a plurality of optical nodes; and derive one or more forwarding tables from the determined topology information; and a forwarding engine configured to: receive the one or more forwarding tables from the network control computer, and forward data units to one or more other optical nodes of the plurality of optical nodes, in accordance with the one or more forwarding tables, via one or more optical links, wherein the one or more optical links comprises free-space optical links, (see e.g., Figure 1, paragraphs [0025], [0039], [0072], [0074], [0076], [0077]). It is inherent that a single network can be distinguished as multiple networks.

Re claim(s) 8, 20, 25, 34

Tasman disclosed wherein at least some of the pluralities of optical nodes are mobile nodes. (see e.g., paragraph(s) [0008-0010], [0012], [0013], [0015])

Re claim 15, Tasman disclosed

An optical ad-hoc network, comprising: an entrance optical node that receives data units

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from a, first network, wherein the first network comprises an Internet Protocol (IP) network; one or more intermediate optical node; that forward data units received from the entrance optical node; and a destination optical node that receives data units forwarded from the one or more intermediate optical nodes and forwards the data units to a second network; wherein the second network comprises an IP network, wherein the entrance optical node, the one or more intermediate optical nodes, and the destination optical node comprise ad-hoc optical nodes that communicate with one another via a plurality of optical links. (see e.g., Figure 1, paragraphs [0025], [0039], [0072], [0074], [0076], [0077]). It is inherent that a single network can be distinguished as multiple networks.

Re claim 21, Tasman disclosed

A system for forwarding data units in an optical ad-hoc network, comprising: means for determining topology information regarding an optical ad-hoc network, wherein the optical ad-hoc network comprises a plurality of optical nodes and wherein at least one optical node of the plurality of optical nodes comprises a mobile node; and means for deriving one or more forwarding tables from the determined topology information; and means for forwarding data units to one or more other optical nodes of the plurality of optical nodes, in accordance with the one or more forwarding tables, via one or more optical links, wherein the one or more optical links comprises free-space optical links.

(see e.g., Figure 1, paragraphs [0025], [0039], [0072], [0074], [0076], [0077]). It is inherent that a single network can be distinguished as multiple networks.

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Re claim 22, Tasman disclosed

A method of forwarding data units in an optical ad-hoc network, comprising: determining topology information regarding an optical ad-hoc network, wherein the optical ad-hoc network comprises a plurality of ad-hoc optical nodes; deriving one or more forwarding tables from the determined topology information; determining one or more differentiated service parameters associated with each of the data units; and forwarding each of the data units to, one or more other optical nodes of the plurality of optical nodes, in accordance with the one or more forwarding tables and the one or more differentiated service, parameters, via one or more optical links.

(see e.g., Figure 1, paragraphs [0025], [0039], [0072], [0074], [0076], [0077]). It is inherent that a single network can be distinguished as multiple networks.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11-14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tasman et al. US 20050050221 A1 (Tasman) in view of Song et al. US 20030190168 A1 (Song).

Re claims 11 and 19, Tasman disclosed the aforementioned invention but not a

A network, comprising: a first sub-network comprising an Internet Protocol (IP) sub-network;

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a second sub-network comprising-an optical ad-hoc network, the optical ad-hoc network; comprising a plurality of optical nodes; and a third sub-network comprising an IP sub-network, wherein the second sub-network appears as a single IP hop for data units traversing from the first sub-network to the third sub-network across the second sub-network. Song disclosed a optical network that bridges separate networks into a single Ethernet bridged network, see e.g., paragraphs: 0015, 0040, 0041, and 0046. It would have been obvious to one of ordinary skill in the art at the time of invention to bridge traffic accordingly to allow users to appear on the same LAN and allow native applications to work across a WAN transparent to the underlying physical media.

Re claim(s) 12-14

Tasman disclosed a variety of interfaces in the network including optical, RF, wireless etc., (see e.g., paragraphs [0025])

5. Claim(s) 5, 9, 17, 18 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Tasman et al. US 20050050221 A1 (Tasman) in view of Mayeux US 5390040 A (Mayeux).

Re claim(s) 5, 9, 17, and 18

Tasman does not disclosed wherein each of the plurality of optical nodes comprises a steerable aperture for forwarding data units between nodes. Mayeux disclosed a steerable telescope. It would have been obvious to one of ordinary skill in the art at the time of invention to use a steerable telescope in the Tasman invention since mobile nodes change

position and would therefore require a change in angular direction of a unidirectional telescope to maintain communication.


Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (571) 272-3024. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dcp


David C. Payne
Primary Examiner
AU 2613